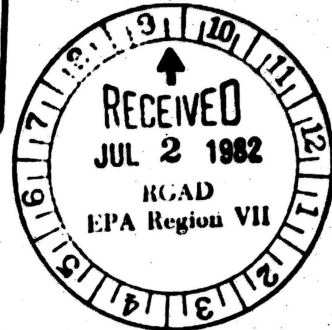




ADVANCED CIRCUITRY

P. O. Box 2847, Commercial Station, Springfield, Mo. 65803 417 862-0751

Site: LITTON  
ID #: MOD007 2703  
Break: 1.6  
Other: 6-30-82



June 30, 1982

Mr. Fred Lafser  
Director, Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102

Dear Mr. Lafser:

Please find enclosed out latest closure plan in accordance with Section 10 CSR25-7.011, RsMo; Section 40 CFR265 Subpart G, Federal Register; and your order No. HW-82-002 dated June 17, 1982. The enclosed plan answers all questions posed by Federal and State correspondence to Advanced Circuitry. It is hoped that this closure plan meets with your approval so that no unnecessary delays occur with our projected August 1st starting date.

Advanced Circuitry has shown in the past our willingness to cooperate with the reasonable request submitted by the Missouri Department of Natural Resources. We fully expect this cooperation to continue thru our closure.

Sincerely,

David Edwards  
Facilities Manager

DE/bs

Enclosures

CC: Mr. Gerald P. Lucey, Litton  
Mr. John J. Franke, Regional Administrator  
EPA, Region VII  
Mr. Robert Schreiber, Director, Division  
of Environmental Quality  
Mr. Burt McCoullough, D.N.R.

ARKHM/SWMG

JUL 2 1982

ion VII K.C., MO

Subpart G - Closure and Post-Closure

265.111 Closure and Post-Closure

- A. Owner shall close facility in a manner to minimize all hazards.

265.112 Closure Plan

- A. In March, 1982, the city sewer system was available for hookup and Litton began its use for effluent discharge. At that time, Litton discontinued discharging effluent waters to "A" pond. Due to the DNR Eminent Hazardous Action of March, 1982, the waste water in "A" pond was removed. We will begin closure on approximately August 1, 1982.
- B. All tests generated at this time, show the sludge to pass the EPA EP toxic testing levels thereby, rendering it non-hazardous. Due to the expedient manner in which the state has required closure, Litton feels it has been given insufficient time to petition for delisting. To meet the deadline, Litton will treat the sludge as it if were hazardous.
- C. Based on calculations, approximately 1800 yd<sup>3</sup> of sludge will have accumulated and this sludge will be reduced to approximately 400 yd<sup>3</sup> by centrifugation.

The plan submitted by our contractor, O.H. Materials Company, is included in this report. The dewatered sludge will be hauled by Keith Batkins Trucking, which is a licensed hazardous waste hauler, to Wright City Missouri. The disposal site is operated by Bob's Home Service.

- D. The soil beneath Pond "A" will be removed to the level in which no more visible contaminants are seen. Copper contamination exhibits a characteristic blue coloration. *visual or analytical? background*
- E. After the sludge is removed, random grab samples of the soil will be taken and analyzed on our atomic absorption unit.
- F. Any accumulation of dewatered sludge will be stored within the confines of "A" pond. The only need of accumulation is due to scheduling delays between shipments of our sludge. No sludge will be stored for longer than 90 days.
- G. Actual closure will start August 1, 1982, and will take approximately 21 days of volume reduction, excavation and loading time. Final closure will consist of grading over and seeding of the site.
- H. Litton reserves the right to alter the plan and permit pending additional information.

265.113 Time Allowed for Closure

- A. Closure is to take place within 180 days of last receipt of wastes.
- B. We may apply to Regional Administrator for longer closure time.

265.114 Disposal or Decontamination of Equipment

- A. All the equipment and structures used in the closure shall be properly disposed of, or decontaminated by high pressure water spray applied within the confines of "A" pond. This is to be done by O.H. Material.

265.115 Certification of Closure

- A. Upon closure, Litton shall submit to the Regional Director certification thereof signed by the operator and an independent professional registered engineer.
- B. Litton will make every effort to comply with the September 15, 1982 closure and certification date. We cannot be responsible for delays caused by weather or subcontractors.

# O. H. Materials Co.

Emergency Response and Environmental Restoration

Regional Offices:  
Ottawa, Illinois  
Atlanta, Georgia  
Washington, D.C.

P.O. Box 551  
Findlay, Ohio 45840  
Telephone (419) 423-3526  
1-800-537-9540

FILE  
HAZARDOUS  
WASTE  
MANAGE

January 26, 1982

Mr. George Copeland  
Facilities Manager  
Litton Advanced Circuitry  
4811 West Kearney  
Springfield, MO 65803

Dear Mr. Copeland:

For this project, we recommend using our Sharples P 5000 Horizontal Super-D Canter as the most cost-effective method of disposing of the pond's sludge contents.

Laboratory tests on samples provided by Litton indicated that the original material containing 10% solids (1 part solid - 9 parts water) could be readily centrifuged. Centrifugation resulted in products containing 50% solids (1 part solid - 1 part water) and a clear supernatant liquid (8 parts water).

Based on past experience, this 50% solid material plus 25% fly ash, or lime, should easily meet landfill requirements for a solid material.

Based on your estimate of 1800 cubic yards, we would pump sludge from the bottom of the lagoon at 80 gallons per minute. We would operate 12 hours per day, with the centrifuge on line 10 hours per day, and complete the pond pump out in about 12 days.

Assuming no further treatment of the supernatant liquid is called for, the liquid would be sent to sewer. The solids would be mixed with 25% fly ash, by weight, (or lime) and loaded into a lined and sealed truck, provided by others, for transportation to the disposal site. All of the above would be done by personnel wearing suitable protective equipment.

This project would take an additional five days for mobilization set up, decontamination, and demobilization, of equipment.

# *O. H. Materials Co.*

Emergency Response and Environmental Restoration

Regional Offices  
Ottawa, Illinois  
Atlanta, Georgia  
Washington, D.C.

P. O. Box 551  
Findlay, Ohio 45840  
Telephone (419) 423-3526  
1-800-537-9540

April 5, 1982

Mr. George Copeland  
Litton Industries  
4811 W. Kearney  
Springfield, MO 65803

Dear Mr. Copeland:

In response to your questions, OHM is pleased to provide the following information to describe the normal steps for centrifugation and disposal of waste:

## **1.0 Characterization and Treatment of Waste**

- 1.1 Determine applicability of centrifuge to concentrate waste (laboratory and pilot plant testing).
- 1.2 Contact landfills to determine acceptable form of waste for disposal (percentage of moisture limits, etc.)
- 1.3 Assess water quality discharge criteria and determine disposition of liquid waste.
  - 1.3.1 Design additional water treatment, if required.

## **2.0 Site Assessment**

- 2.1 Survey available work areas and plan equipment locations and traffic flow.
- 2.2 Determine most cost effective power supply.
- 2.3 Plan for secure holding of concentrated waste prior to disposal.
- 2.4 Finalize treatment and disposition of centrifuge water.
  - 2.4.1 Determine analytical and sampling requirements.
- 2.5 Finalize methods of extracting sludge from lagoon (or other) to centrifuge.
- 2.6 Survey available services and/or equipment from customer and interface.

## **3.0 Mobilization and Setup**

- 3.1 Mobilize equipment to customer's site.
- 3.2 Set up equipment according to previous planning. The following process steps outlined in Figure 1 are included as required.

3.3 Set up waste holding areas, if needed.

3.4 Finalize disposal arrangements.

3.5 Set up analytical and sampling programs

4.0 Operation

4.1 After optimizing all process steps, start continuous operation.

4.2 Solid waste to be removed from site as soon as possible to minimize storage.

4.3 Sample and analyze water from centrifuge as required.

4.4 Final scraping of lagoon with equipment as required.

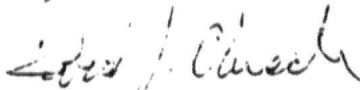
5.0 Teardown and Cleanup

5.1 Remove equipment from customer's site.

5.2 Restore site as required.

Please contact me or John Copus if additional information is needed.

Very truly yours,

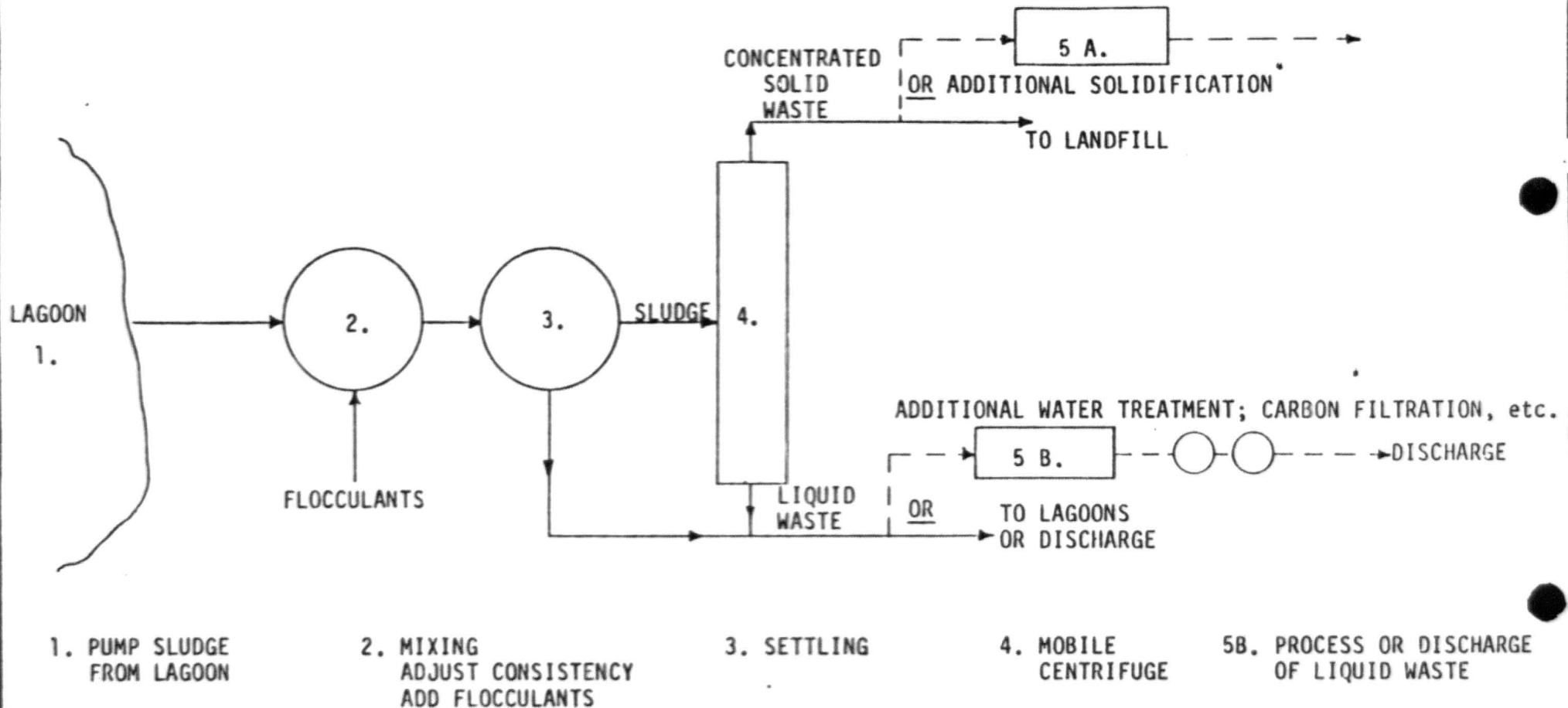


Robert J. Ohneck  
Director, Project Engineering

RJO:sg

cc: #100.261

5A. STORE OR DISPOSE  
OF SOLID WASTE



— — — OPTIONAL PROCESSES AS REQUIRED

SCALE NONE	DRAWING MHB	NO.	DATE	REVISION	BY	PROCESS FLOW SCHEMATIC MOBILE CENTRIFUGATION	O. H. MATERIALS CO. EMERGENCY RESPONSE AND ENVIRONMENTAL RESTORATION BOX 555 FINCHLEY, OHIO 418423-3020 800-537-9540		
DATE 4-05-82	CHECKED						PROJECT	DRAWING	REVISION
SHEET ___ OF ___	APPROVED PJO								